



# Appendix H

## SWMP Plan Revision

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# **Baldwin County Commission**

322 Courthouse Square  
Bay Minette, Alabama 36507



## **Storm Water Management Program (SWMP) Plan**

**NPDES Permit No. ALR040042**

**March 2014**

Prepared By:

**HYDRO  
ENGINEERING  
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2124 Moore's Mill Road ♦ Suite 120 ♦ Auburn, Alabama 36830

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# 1. Program Administration

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## 1.1. Introduction

In 1990, the U.S. Environmental Protection Agency (EPA) promulgated regulations establishing Phase I of the National Pollutant Discharge Elimination Systems (NPDES) storm water program. The Phase I program for municipal separate storm sewer systems (MS4s) requires operators of "medium" and "large" MS4s that generally serve populations of 100,000 or greater to implement a storm water management program as a means to control polluted discharges from certain municipal, industrial and construction activities into the MS4.

In 1999, EPA promulgated regulations establishing Phase II of the NPDES storm water program. The Phase II program extends coverage of the NPDES storm water program to regulated "small" MS4s. A regulated "small" MS4 is located within an "urbanized area" as defined by the Census Bureau or as designated by the NPDES permitting authority.

The Alabama Department of Environmental Management (ADEM) presently has primary jurisdiction over permitting and enforcement of the storm water program for Alabama. In November 2011, Baldwin County submitted a request to ADEM to be re-designated from a Phase I MS4 to a Phase II MS4. On December 22, 2011, ADEM granted this request and issued coverage under the MS4 Phase II General Permit (NPDES Permit Number ALR040042) for storm water discharges associated with the Baldwin County MS4.

The Storm Water Management Program (SWMP) Plan has been developed to generally describe the County's efforts to maintain compliance with the requirements of NPDES Permit ALR040042. This document is intended to be a dynamic document and shall be revised as needed to accurately reflect the County's activities in implementing its SWMP.

## 1.2. Legal Authority

### 1.2.1. Zoning Ordinance

On August 8, 1991, the Baldwin County Planning and Zoning Act (Act No. 91-179), Code of Alabama §45-2-261 was passed by the Alabama State Legislature. This legislation, and its subsequent amendments, provide the basic framework for the County's growth management activities and required the development



and maintenance of a master plan for the use and development of unincorporated Baldwin County. The Baldwin County Planning and Zoning Act authorized the County Commission to:

- Create Baldwin County Planning and Zoning Commission;
- Create Board of Adjustment;
- Create planning districts within unincorporated areas of the County;
- Allowed zoning within planning districts that vote their desire to come under the County planning and zoning authority; and,
- Required the development and maintenance of a “master plan”.

On April 6, 1999, the County Commission adopted the Baldwin County Zoning Ordinances. A copy of the Baldwin County Zoning Ordinances is provided in Appendix A. It was most recently amended on August 6, 2013.

The Zoning Ordinance is in force and effect in the planning districts established in Baldwin County in compliance with the requirements of Act 91-719, as amended, which elect to come within the planning and zoning authority of the Baldwin County Commission. Currently the County has zoning authority of approximately 4.062 mi<sup>2</sup> (61%) of the land located within the MS4 Area. The areas where the County has zoning authority within its MS4 Area are shown in Figure 1-1.

### **1.2.2. Subdivision Regulations**

On October 16, 2012, the County Commission adopted the latest revisions to the Subdivision Regulations. These Subdivision Regulations establish procedures and standards for the development of subdivisions or proposed additions to existing subdivisions within the subdivision jurisdiction of Baldwin County in an effort to regulate the minimum lot size, the design, planning and construction of all public streets, public roads, drainage structures, and to require the proper placement of public utilities.

A copy of the Baldwin County Subdivision Regulations is provided in Appendix A.

### **1.2.3. Flood Damage Prevention Ordinance**

On April 5, 2005, the County Commission adopted the latest revisions to the Flood Damage Prevention Ordinance. The purpose of this ordinance is to promote the public health, safety and general welfare and to minimize public and private losses due to flood conditions in specific areas of provisions designed to:



- Require that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;
- Restrict or prohibit uses which are dangerous to health, safety and property due to water or erosion hazards, or which increase flood heights, velocities, or erosion;
- Control filling, grading, dredging and other development which may increase flood damage or erosion;
- Prevent or regulate the construction of flood barriers which will unnaturally divert flood waters or which may increase flood hazards to other lands; and,
- Control the alteration of natural flood plains, stream channels, and natural protective barriers which are involved in the accommodation of flood waters.

A copy of the Flood Damage Prevention Ordinance is provided in Appendix A.

#### **1.2.4. Legislative Act 2005-200**

On May 26, 2005, the Alabama Legislator passed Act Number 2005-200 known as "The Alabama Limited Self-Governance Act". This act expands the authority of counties to regulate activities that may create a nuisance to include:

- Weeds;
- Litter or rubbish;
- Animals and animal nuisances;
- Junkyards;
- Noise;
- Unsanitary sewage; and,
- Pollution creating a public nuisance.

The act also restricts the powers of a county commission and prohibits the following activities as they relate to a nuisance.

- Authority to levy or collect any tax;
- Regulation over any business activities regulated by the Federal Surface Transportation board, the Public Service Commission, the Department of



Agriculture and Industries, or the Alabama Department of Environmental Management;

- Action affecting any court;
- Action affecting any public school system;
- Action affecting pari-mutuel betting facility;
- Action affecting the private or civil law governing private or civil relationships;
- Action extending the power of regulation over the construction maintenance, operation or removal of facilities used in the generation, transmission, or distribution of water, sewer, gas, telecommunications, or electric utility services;
- Action affecting the rights granted to an agricultural, manufacturing, or industrial plant or establishment, or farming operation;
- Action affecting or enforcing environmental easements; and,
- Action restricting or regulating surface mining or underground mining activities that have been granted federal or state permits.

Since Baldwin County has limited legal authority to implement and/or enforce some requirements of the NPDES permit, the County may rely upon State programs to assist in the implementation and enforcement of its SWMP Plan.

A copy of The Alabama Limited Self Governance Act is provided in Appendix A.

### **1.2.5 Baldwin County Master Plan - 2013**

In accordance with Act No. 91-719 (Codified at Section 45-2-261, et seq., Code of Alabama 1975) the Baldwin County Planning and Zoning Commission prepared, and the Baldwin County Commission adopted, the Baldwin County Master Plan – 2013. According to the Act, the County Commission "shall appoint the Planning Commission to make and maintain in an up-to-date manner, a Master Plan for the physical development of the unincorporated areas of Baldwin County. The Master Plan with accompanying maps, plats, charts and descriptive material shall show the Planning Commission's recommendations for the use and development of the unincorporated area of Baldwin County".



The Master Plan consists of seven chapters covering topics such as implementation, composition, intergovernmental relations, parks and recreation and historic preservation. Maps incorporated into the plan include Planning Districts, Current Zoning, Future Land Use, School Locations, Parks and Public Access and Fire Districts. The final chapter of the Master Plan deals with revision and amendment. The plan is intended to be a living document. As such, it is proposed to be reviewed annually in order to determine if revisions and amendments are warranted due to changing conditions. The first review would take place within six months of initial adoption. A second review would be conducted six months later, and subsequent reviews would take place on an annual basis. With regard to future land use, the plan initially calls for non-binding future land use designations in the Planning Districts which have voted their desire to come under the Planning and Zoning authority of the Baldwin County Commission. Future land use designations for specific planning areas and unzoned Planning Districts could be applied during review and amendment processes.

In preparing the Master Plan, the Planning Commission held eight work sessions and two public hearings. The first public hearing was held on July 11, 2013, for the purpose of obtaining public comment. The second public hearing was held on August 1, 2013. At that time, the Planning Commission voted unanimously to recommend approval of the Baldwin County Master Plan – 2013, to the County Commission. The vote of the Planning Commission served as its final report to the Baldwin County Commission for the adoption of the Master Plan.

The first public hearing was held before the Baldwin County Commission on September 3, 2013. The second and third public hearings were held September 17, 2013, and October 1, 2013, with adoption occurring at the October meeting. The Master Plan will be studied for revisions beginning in April of 2014.

A copy of the Baldwin County Master Plan – 2013 is provided in Appendix A.



### 1.3. SWMP Revision

Revisions to the SWMP Plan shall be documented in Table 1-1.

**Table 1-1**  
**SWMP Revision Record**

Date:	Revised By:	Description of Revision:
21 June 2012	Hydro Engineering Solutions, LLC	Initial Storm Water Management Program (SWMP) Plan
31 March 2013	Baldwin County Commission	Annual SWMP Plan Review and Update
31 March 2014	Baldwin County Commission	Annual SWMP Plan Review and Update

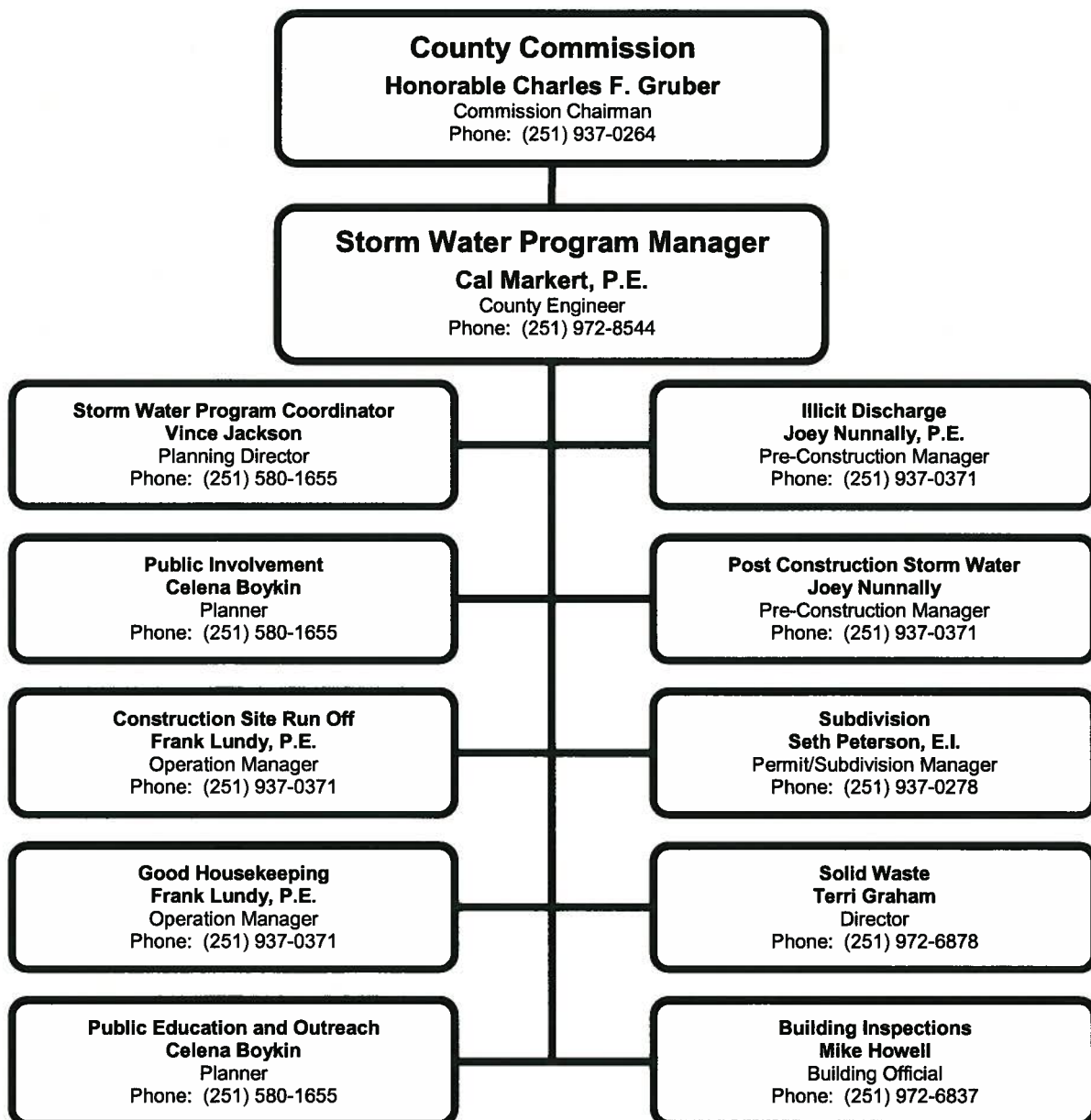




## 1.4. Program Administration

The County's general organizational structure for administrating its SWMP Plan is provided in Figure 1-2. The specific organizational structure associated with implementation of each program element is described in the following sections.

**Figure 1-2**  
**SWMP Organizational Chart**





## 1.5. Signatory Requirements

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Charles F. Gruber  
Name

Commission Chairman  
Title

Signature

Date

Address: Baldwin County Commission  
Baldwin County Administration Building  
312 Courthouse Square, Suite 12  
Bay Minette, Alabama 36507

Phone: (251) 937-0264

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To capitalize on education materials and programs that have been developed, Baldwin County has formed partnerships with several state and local organizations including:

- Alabama Department of Environmental Management;
- Alabama Clean Water Partnership;
- Alabama Cooperative Extension System;
- City of Daphne;
- City of Fairhope;
- City of Spanish Fort;
- City of Foley;
- City of Robertsdale;
- Town of Magnolia Springs;
- Town of Silverhill;
- Town of Summerdale;
- Town of Loxley;
- Weeks Bay Preserve;
- Weeks Bay Watershed Project;
- Mobile Bay National Estuary Program;
- Wolf Bay Watershed Watch;
- Perdido Bay Watershed Planning;
- Baldwin County Environmental Advisory Board;
- Alabama Coastal Foundation; and,
- People Against a Littered State.

As the County's MS4 program continues to evolve, the County will seek partnerships with other agencies and organizations to facilitate the public education program.

#### **4.4.2. Brochures**

Baldwin County has developed a number of brochures for a variety of audiences and a variety of topics. Currently, most of their brochures are directed towards developers, contractors, and other professionals pertaining to planning, zoning, and construction. All brochures are available at the Baldwin County Courthouse in Bay Minette and Satellite Courthouses in Foley and Fairhope. The County will work towards the ultimate goal of putting all brochures on the County's website.

Brochures currently available through Baldwin County are summarized in Table 4-1 and provided in Appendix C.



#### 4.4.3. Website

The internet provides a very accessible mechanism for making information and data available to residents. A specific section of the County's Highway Department website is devoted to the MS4 program as well as information regarding the County's storm water related activities.

**Table 4-1  
Summary of Brochures**

Description	Target Pollution Source	Target Audience
Stormwater Management Best Practices	Construction Site Erosion	Professionals Developers Contractors Elected Officials
Wetlands	Informational	Home Owners Renters Schools Business Owners Professionals Developers Contractors Elected Officials

#### 4.4.4. Workshops

Workshops are useful in educating a specific target audience about a specific topic or issue. Capitalizing on existing training programs, the County will work with its partners to sponsor workshops in a variety of topics. Workshops that have been identified for this permit cycle may include the following:

- Nonpoint Education for Municipal Officials (NEMO) – Mobile Bay National Estuary Program Video "Understanding the MS4 Process" is available.
- Erosion and Sediment Control – The County may evaluate and identify workshops that will be beneficial to city staff, professionals and development community.



- Low Impact Development – The County may evaluate and identify workshops that will be beneficial to County staff, professionals and development community.

As the County's MS4 program continues to evolve, the types and frequency of workshops may be modified to address the changing needs of the County.

#### **4.4.5. Training**

County departments that provide assistance in implementing the County's SWMP include the Highway Department, Planning and Zoning Department, Building Inspection Department, Emergency Management Agency, and Solid Waste Department. The County will evaluate potential training programs, activities and/or materials that can be used to educate the County's staff in storm water related issues.

#### **4.5. Program Goals**

The County has developed realistic, achievable and measurable goals and performance milestones to measure the progress in implementing a Public Education and Outreach Program. Program goals are summarized in Table 4-2.

#### **4.6. Program Evaluation**

The most basic measure to evaluate the program effectiveness is to evaluate whether the program goals are being met. At the end of the permit year, the County will evaluate the program goals and overall effectiveness in educating the public on storm water related issues. Results of the program evaluation will be summarized in the Annual Report.



**Table 4-2  
Public Education and Outreach – Program Goals**

Program Component	BMP		Frequency	Schedule	Responsible Department
	Description				
<i>Local Partnerships - Participation with local groups due to funding.</i>	Participation in Mobile Bay National Estuary Program		1 Meetings	31 March 2014	Highway Dept.
	Participation in Weeks Bay Watershed Project		1 Meetings	31 March 2014	
	Meet w/ Fairhope, Daphne & Spanish Fort		Quarterly	31 March 2014	
	Identify additional partnerships		Continuous	31 March 2014	
Brochures	Maintain Display at County Facilities		Continuous	31 March 2014	Highway Dept.
	Evaluate Target Audiences		Annually	31 March 2014	
	Evaluate Pollution Sources		Annually	31 March 2014	
	Develop New Brochures		1 per year	31 March 2014	
	Identify Public Events for Distribution		Continuous	31 March 2014	
<i>Test Brochures on Website - Conditions</i>	Maintain Inventory of Articles		Continuous	31 March 2014	Highway Dept.
Website	Incorporate Storm Water Page		Initial	31 March 2014	Highway Dept.
Workshops	Evaluate Workshop Topics		Annually	31 March 2014	Highway Dept.
	NEMO Workshop <i>(Video)</i>		Every 3 years	31 March 2015	
	Erosion Control Workshop		Annually	31 March 2014	
	LID Workshop		Every 3 years	31 March 2015	
Training	Evaluate Training Needs		Continuous	31 March 2014	Highway Dept.
	Identify Training Programs / Materials		Annually	31 March 2014	
	Conduct Training		As Needed	31 March 2014	
Program Evaluation	Evaluate Program Effectiveness		Annually	31 March 2014	Highway Dept.



### **5.2.1. Baldwin County Water Festival**

The mission of the Baldwin County Water Festival was to educate students about all aspects of surface water and groundwater and other related natural resources (such as wetlands, forestry, wildlife and much more) and to instill in them a general environmental awareness and stewardship ethic. Students and their teachers left increased knowledge and awareness of the importance of precious water resources and on becoming good environmental stewards of these resources. All 4<sup>th</sup> Grade students in Baldwin County including, public, private, and home schooled students were invited to participate. The festival had total participation over 7,000 participants since 2003.

In recent years, the County provided staff members who actively participated in the festival. The Baldwin County Water Festival was recently discontinued due to a lack of funding.

### **5.2.2. Coastal Kids Quiz**

The Coastal Kids Quiz is an environmental quiz competition for teams of 5<sup>th</sup> graders in Baldwin and Mobile Counties. Questions are taken from standard science texts and materials provided by the Alabama Coastal Foundation, including brochures and activity books covering coastal environmental issues. The competition has taken place since 2001.

The County provides staff that actively participates in the competition. This is an excellent opportunity to help educate 5<sup>th</sup> grade students on environmental matters.

### **5.2.3. Baldwin County Master Environmental Educator**

Many County employees have also participated in the Alabama Cooperative Extension Service's Master Environmental Educator (MEE) program. The Baldwin County MEE Program was created in 1995 and is an outreach program of the Baldwin County Extension Office. Volunteers are trained to teach eight environmental lessons pertaining to the most critical environmental issues facing Baldwin County:

- Aquatic Nuisance Species;
- Backyard Wildlife Habitat;
- Energy;
- Groundwater Pollution;
- Invasive Plant Species;





- Nonpoint Source Pollution;
- Recycling; and,
- The Water Cycle.

Volunteers throughout Baldwin County participate in an intensive two-day MEE training each year. Each volunteer gives back at least 20 hours a year to the community. Classroom teachers can request and schedule a lesson, which also correlates to the Alabama Course of Study for Science.

#### **5.2.4. Weeks Bay Reserve Watershed Wagon**

The Baldwin County Planning and Zoning Department has worked to help Weeks Bay Reserve implement the Watershed Wagon (Figure 6-2). The Watershed Wagon is a mobile interactive classroom which uses hands-on activities involving the connection between land uses, potential pollution sources, and water quality.

The Wagon also includes a coastal watershed model illustrating the effect of storm water runoff and nonpoint source pollution.

**Figure 5-1**



**Watershed Wagon**

#### **5.2.5. Litter Abatement Programs**

The County partners with People Against a Littered State (PALS) in order to help implement litter abatement programs. Current litter abatement programs include:

- Adopt-a-Mile;
- Adopt-a-Stream;
- Alabama Coastal Cleanup; and,
- Baldwin County Clean Sweep.





The County currently has a link to apply for Adopt-a-Mile on their website. Citizens can “adopt” a stretch of county roads or federal or state highways.

In the fall of each year, PALS will plan, organize and host The Alabama Coastal Cleanup. The County is an in-kind sponsor with this event.

Baldwin County Clean Sweep is an activity approved by the Baldwin County Commission which provides county residents a free day to discard any unwanted debris and waste. The event encourages the proper disposal of waste in Baldwin County and discourages illegal dumping and piling of debris on roadways.

#### **5.2.6. Recycling**

The County’s Solid Waste Department has established 30 recycling locations throughout the County for residents to drop off items. Accepted recyclables include:

- Unwaxed Cardboard;
- Newspapers;
- Magazines;
- Phonebooks;
- Aluminum Cans;
- Aluminum Scrap Metal; and,
- Category 1 through 4 Plastics.

The County also has a used cooking oil recycling program which converts the oil into useable energy and a seasonal Christmas Tree recycling program which contributes material to the County compost program.

#### **5.2.7. Call Center**

The County has a call center to receive complaints from its residents. Depending upon the type of complaint, the call center will route information to the appropriate department for evaluation and response. A centralized call center has been established at the Baldwin County Emergency Operations Center in Robertsdale. Telephone contact information is (251) 972-6897.

The call center is provided on the County’s website.



#### **5.2.8. Household Hazardous Waste Collection**

The County operates a household hazardous waste collection facility at the Magnolia Landfill on a year-around basis. For a fee, residents can dispose of household hazardous waste such as paints, motor oil, pesticides, herbicides, cleaners, solvents, etc.

#### **5.2.9. Waste Cooking Oil Recycling**

The County has implemented a cooking oil recycling program and currently collects waste cooking oil at the Magnolia Landfill, MacBride Landfill and Bay Minette Transfer Station. Waste cooking oil has the ability to clog drain pipes and cause extensive damage to the local sanitary sewer system, including pipe breaks and sewage overflows. Residents can drop off waste cooking oil at any location free of charge. The oil is then recycled into biodiesel.

#### **5.2.10. Baldwin County Commission Meetings**

All regular meetings of the Baldwin County Commission are advertised and open to the public. Meetings are televised and broadcast on a delayed basis by local cable access stations. In addition, the meetings may be viewed live on the County website. Past meetings are also available on the website, and DVDs of these meetings may be obtained from the Baldwin County Archives Department. Public hearing items are advertised through certified mail and through notices in the newspapers of general circulation within Baldwin County, depending on legal requirements.

### **5.3. Program Goals**

The County has developed realistic, achievable and measurable goals and performance milestones to measure the progress in implementing a Public Involvement Program. Program goals are summarized in Table 5-1.

### **5.4. Program Evaluation**

The most basic measure to evaluate the program effectiveness is to evaluate whether the program goals are being met. At the end of the permit year, the County will evaluate the program goals and overall effectiveness of the Public Involvement Program on storm water related issues. Results of the program evaluation will be summarized in the Annual Report.



Table 5-1  
Public Involvement / Participation – Program Goals

Program Component	BMP		Frequency	Schedule	Responsible Department
	Description				
General Activities	Maintain Call Centers		Continuous	31 March 201 <del>4</del>	Highway Dept.
	Adopt-a-Mile Program		Continuous	31 March 201 <del>4</del>	
	Coastal Clean-up		Annually	31 March 201 <del>4</del>	
	Adopt-a-Stream Program		Develop	31 March 2015	
	Stream Signage		<i>Develop</i>	31 March 201 <del>4</del>	
	Storm Drain Marking Program		<i>Continuous</i>	31 March 201 <del>4</del>	
	Recycling Program		Continuous	31 March 201 <del>4</del>	Solid Waste Dept.
	Household Hazardous Waste Collection		Continuous	31 March 201 <del>4</del>	
	Waste Cooking Oil Recycling		Continuous	31 March 201 <del>4</del>	
Education Events	<del>Baldwin County Groundwater Festival</del>		<del>Annually</del>	<del>31 March 2013</del>	Highway Dept.
	Coastal Kids Quiz		Annually	31 March 201 <del>4</del>	
	Environmental Educator Program		Annually	31 March 201 <del>4</del>	
	Watershed Wagon		Annually	31 March 201 <del>4</del>	
Program Evaluation	Evaluate Program Effectiveness		Annually	31 March 201 <del>4</del>	Highway Dept.
<i>General</i>	<i>County Commission Meetings</i>		<i>Continuous</i>	<i>31 March 2014</i>	<i>County Commission</i>



## **6.11. Sanitary Sewer System**

Residents within the County's portion of the MS4 boundary are provided sanitary sewer service by one of the following sources;

- 1) Sanitary Sewer System; or
- 2) On-Site Sewage Disposal.

### **6.11.1. Sanitary Sewer Systems**

Portions of the County's MS4 Area may be serviced by a sanitary sewer system operated by the adjacent municipalities. If the County observes any problems with the sewer system, the County shall report the problem to the following.

**City of Daphne**  
Ashley Campbell  
(251) 621-3080

**City of Fairhope**  
Kim Burmeister  
(251) 990-2887

**City of Spanish Fort**  
Bruce Renkert  
(251) 626-4993

### **6.11.2. Baldwin County Health Department**

Some residents located within the County's MS4 area may utilize on-site sewage disposal systems. The Alabama Department of Public Health has the regulatory authority for the design, permitting, construction and maintenance of individual on-site sewage disposal systems. If the County observes any problems with an on-site sewage disposal system, the County shall report the problem to the following.

**Baldwin County Health Department**  
Environmental  
(251) 937-6935      Bay Minette  
(251) 947-3618      Robertsedale



As the County acquires data regarding the location of on-site sewage disposal systems, the County will update GIS data and maps to incorporate best available data.

## **6.12. Enforcement**

An effective illicit discharge and detection program uses an escalating scale of enforcement action to abate illicit discharges. Due to limited home rule, Baldwin County does not have the authority to create or adopt an Illicit Discharge Ordinance. Through the subdivision regulations and education, the County is encouraging the prevention of illicit discharges. The current procedure is to report illicit discharge complaints to the appropriate agency such as the Baldwin County Health Department or ADEM. In addition, the County can only maintain what is in the County right-of-way. It cannot maintain private subdivision storm water systems.

## **6.13. Staff Training**

Staff selected to perform the outfall reconnaissance inventory shall receive the following initial training.

### **Class Room Training**

- Outfall reconnaissance inventory

### **Field Training**

- Water quality monitoring procedures;
- Outfall reconnaissance inventory field procedures; and,
- Illicit discharge tracking procedures.

Staff shall receive annual refresher training. Any new staff incorporated into the outfall reconnaissance inventory shall receive the initial training described above and annual refresher training.

## **6.14. Standard Operating Procedures**

The County has developed Standard Operating Procedures (SOPs) for the various activities required for implementing the Illicit Discharge Detection and Elimination Program. SOPs shall include but are not limited to the following:



- Sampling equipment use, maintenance and storage;
- Outfall Reconnaissance Inventory;
  - Field procedures
  - Data collection
  - Data management
  - Sample Collection
- Illicit discharge evaluation; and,
- Hazardous materials.

SOPs shall be included in the Appendix E.

### **6.15. Program Goals**

The County has developed realistic, achievable and measurable goals and performance milestones to measure the progress in implementing the Illicit Discharge Detection and Elimination Program. Program goals are summarized in Table 6-3.

### **6.16. Program Evaluation**

The most basic measure to evaluate the program effectiveness is to evaluate whether the program goals are being met. At the end of the permit year, the County will evaluate the program goals and overall effectiveness of Illicit Discharge Detection and Elimination Program. Results of the program evaluation will be summarized in the Annual Report.



Table 6-3  
Illicit Discharge Detection and Elimination – Program Goals

Program Component	BMP		Frequency	Schedule	Responsible Department
	Description				
Legal Authority	Develop Illicit Discharge Ordinance		Develop and update as needed	22 June 2015	Highway Dept.
	Adopt Illicit Discharge Ordinance		Develop and update as needed	22 December 2016	
Data Acquisition	County GIS Data		Annually	31 March 2014	Highway Dept.
	Outfall Inventory Schedule		Initial	31 March 2014	Highway Dept.
	Outfall Inventory Inspection Form		Initial	31 March 2014	
	Outfall Map		Update Annually	31 March 2017	
	Outfall Inventory		Continuous	31 March 2017	
Illicit Discharges	Complaint Tracking System		Develop and update as needed	31 March 2014	Highway Dept.
	Illicit Discharge Inspection Form		Develop and update as needed	31 March 2014	
Standard Operating Procedures	Sample equipment use, maintenance		Develop and update as needed	31 March 2014	Highway Dept.
	Outfall Reconnaissance Inventory		Develop and update as needed	31 March 2014	
	On-site sewer disposal system evaluation		Develop and update as needed	31 March 2015	
	Sanitary sewer overflow evaluation		Develop and update as needed	31 March 2015	
	Evaluate Program Effectiveness		Annually	31 March 2014	Highway Dept.
Program Evaluation					



Section 8  
Post Construction Storm Water Management

Table 8-1  
Post Construction Storm Water Management – Program Goals

Program Component	BMP		Frequency	Schedule	Responsible Department
	Description				
Legal Authority <i>Cannot develop and adopt ordinance due to limited home rule.</i>	<del>Develop Post-Construction Storm Water Management Ordinance</del>		Initial	<del>31 March 2015</del>	Planning and Zoning Highway Dept.
	<del>Adopt Post Construction Storm Water Management Ordinance</del>		Initial	<del>31 March 2015</del>	
	Subdivision Regulations	Review and update as needed		31 March 2015	
	Zoning Regulations	Review and update as needed		31 March 2015	
Low Impact Development	Evaluate LID Practices	Annually		31 March 2015	Highway Dept.
	LID Policy	Develop and update as needed		31 March 2015	
Non-Structural BMPs	Develop Plan Review Procedures	Develop and update as needed		31 March 2015	Highway Dept.
	Develop Inspection Procedures	Develop and update as needed		31 March 2015	
	Develop Maintenance Requirements	Develop and update as needed		31 March 2015	
	Evaluate and Identify BMPs	Develop and update as needed		31 March 2015	
Structural BMPs	Develop Design Standards	Develop and update as needed		31 March 2015	Highway Dept.
	Develop Review Checklist	Develop and update as needed		31 March 2015	
	Develop SOP	Develop and update as needed		31 March 2015	
	Develop Tracking System	Develop and update as needed		31 March 2015	
Inspections	Track Number and Type of Inspections	Annually		31 March 2015	Highway Dept.
	Evaluate Training Needs	Annually		31 March 2015	
	Identify Training Sources	Annually		31 March 2015	
	Conduct Training	Annually		31 March 2015	
Program Evaluation	Evaluate Program Effectiveness	Annually		31 March 2015	Highway Dept.





- Polycyclic aromatic hydrocarbons (PAHs) such as petroleum and ethylene glycol, resulting from spills and leaks of oil, gas, antifreeze, and hydraulic fluids.

The County has implemented and maintained BMPs to provide a means of mitigating the negative impacts of various pollutants that can be carried off by rainfall and receiving waters.

The County maintains approximately 104.35 miles of paved roads, approximately 0.08 miles of unpaved roads and 9 bridges within the County's MS4 Area. The location of roads and bridges located within the County's MS4 Area is presented in Figure 9-1. The majority of roads located within the County's MS4 Area have open grassed drainage swales that parallel both sides of the road.

The County uses a variety of structural and nonstructural BMPs during the planning, design, operation and maintenance of its roadways and bridges. These BMPs help to mitigate the adverse effects to stormwater runoff by reducing the volume and concentration of pollutants generated by motor vehicle traffic.

#### **9.2.3.1. GIS Data**

The County has a dedicated GIS/CIMS manager responsible for obtaining, developing, and maintaining the County's GIS data and system. Select attribute data for mapping layers used to support the County's Roadways Program include, but are not limited to, the following:

##### **Roadways**

- Road Name
- Road District
- Length
- Surface Type
- MS4 Area

##### **Bridges**

- Bridge Name
- Road Name
- Sufficiency Rating
- Creek Name



website and Adopt-a-Mile registration. Currently, 6 miles of County roads within the MS4 Area are a part of the Adopt-a-Mile program.

#### **9.2.3.8. Resurfacing**

County roads with deteriorated paved surfaces are typically overlaid with new asphalt or milled, reclaimed, and replaced with new asphalt paving, depending on the deterioration cause. When roads are overlaid, there is usually no erosion protection required since no soil is disturbed. If roads require milling and replacing, however, an erosion control plan is implemented to prevent sediment transport from the exposed road base or any other disturbed areas.

#### **9.2.3.9. Unpaved Roads**

Unpaved roads are inspected with the same regularity as paved roads. Unpaved road inspections are documented on a spreadsheet which is updated annually. Inspections include documenting ditching, surface gravel condition, environmental concerns, and maintenance issues and difficulty.

There are currently 0.08 miles of unpaved (dirt) roads within the MS4 area. Paving of unpaved roads is based on priority.

#### **9.2.3.10. Deicing Activities**

Based upon the County's location, winter weather is infrequent. The County spreads sand on roads with snow or ice cover. After winter weather has subsided, the County removes the sand using a small front end loader and a street sweeper.

### **9.2.4. Pesticides, Herbicides and Fertilizers**

Pesticides, herbicides and fertilizers, when used properly, are helpful tools in maintaining grassed and landscaped areas. However, excess use can threaten natural ecosystems, particularly through runoff to streams and rivers or by infiltration to groundwater. Because of this concern for environmental health, the NPDES Permit requires the County to evaluate the use of pesticides, herbicides and fertilizers (PHF) to seek opportunities to reduce the use of these materials.

When all the land occupied by parks, right-of-ways, easements, open space and County facilities is added together, the County may own or control a significant portion of the land within a watershed. Maintenance of these areas frequently includes mowing, fertilization, pesticide application, herbicide application and



### **9.2.6.1 Community Rating System (CRS)**

The National Flood Insurance Program (NFIP) provides federally backed flood insurance that encourages communities to enact and enforce floodplain regulations. To be covered by a flood insurance policy, a property must be in a community that participates in the NFIP. Baldwin County has been participants since 1978 and currently holds a Class 6 Building Code Effectiveness Grading Schedule (BCEGS) grade for One & Two Family dwellings and Commercial & Industrial buildings.

The Community Rating System (CRS) Program is a point based system which provides incentives for communities to do more than simply regulate construction of new buildings to minimum national standards. Under CRS, flood insurance premiums are adjusted to reflect community activities which reduce flood damage to existing buildings, manage development in areas not mapped by the NFIP, protect new buildings beyond the minimum NFIP protection level, help insurance agents obtain flood data and help people obtain flood insurance.

The objective of the CRS program is to reward communities that are doing more than meeting the minimum NFIP requirements to help citizens prevent or reduce flood losses. The goal of the CRS program is to encourage, by the use of flood insurance premiums adjustments, community and state activities beyond those required by the NFIP.

Baldwin County has voluntarily participated in the Community System Program since 1995 and currently enjoys a Class 6 rating which represents a savings of 20% for Special Flood Hazard policies and 10 % for standard risk policies.

The CRS program is broken down into 18 creditable activities as follows:

#### *Public Information Activities*

- Elevation Certificates
- Map Information Service
- Outreach Projects
- Hazard Disclosure
- Flood Protection Information
- Flood Protection Assistance



*Mapping & Regulatory Activities*

- Additional Flood Data
- Open Space Preservation
- Higher Regulatory Standards
- Flood Data Maintenance
- Stormwater Management

*Flood Damage Reduction Activities*

- Floodplain Management Planning
- Acquisition and Relocation
- Flood Protection
- Drainage System Maintenance

*Flood Preparedness Activities*

- Flood Warning Program
- Levee Safety
- Dam Safety

Baldwin County provides public information to advise property owners, potential property owners, and visitors about hazards, ways to protect people and property from the hazards, and the natural beneficial functions of floodplains. Activities include flood determinations and technical assistances, public outreach and education, and real estate disclosure.

### **9.3. Program Goals**

The County has developed realistic, achievable and measurable goals and performance milestones to measure the progress in implementing a Pollution Prevention / Good Housekeeping Program. Program goals are summarized in Table 8-1.



#### **9.4. Program Evaluation**

The most basic measure to evaluate the program effectiveness is to evaluate whether the program goals are being met. At the end of the permit year, the County will evaluate the program goals and overall effectiveness of the Pollution Prevention / Good Housekeeping Program to help reduce pollutants in storm water runoff. Results of the program evaluation will be summarized in the Annual Report.



**Table 9-6  
Pollution Prevention / Good Housekeeping – Program Goals**

Program Component	BMP		Frequency	Schedule	Responsible Department
	Description				
Facility Inventory	Identify County Facilities and Operations		Annually	31 March 2014	Highway Dept.
	<del>Inventory Industrial and Commercial Facilities</del>		<del>Annually</del>	<del>31 March 2014</del>	
Facility Assessment	Develop Facility Evaluation Form		Develop and update as needed	31 March 2014	Highway Dept.
	Conduct Facility Evaluation		Initial	31 March 2014	
	Prioritize Facilities		Initial	31 March 2014	
	Develop Facility Recommendations		Initial	31 March 2014	
	Develop Schedule for Implementation		Initial	31 March 2014	
Standard Operating Procedures	Bridge Inspection / Maintenance		Develop and update as needed	31 March 2015	Highway Dept.
	Dirt Road Inspection / Maintenance		Develop and update as needed	31 March 2015	
	Paved Road Inspection / Maintenance		Develop and update as needed	31 March 2015	
	Right-of-Way Maintenance		Develop and update as needed	31 March 2015	
	Facility Inspections		Develop and update as needed	31 March 2015	
Training	Evaluate Training Needs		Develop and update as needed	31 March 2014	Highway Dept.
	Identify Training Resources		Develop and update as needed	31 March 2014	
	Implement Training		Annually	31 March 2014	
Flood Management	Review Flood Projects		As Needed	31 March 2014	Highway Dept.
Program Evaluation	Evaluate Program Effectiveness		Annually	31 March 2014	Highway Dept.



**Table 9-8  
Roadways – Program Goals**

Program Component	BMP		Schedule	Responsible Department
	Description	Frequency		
GIS Data	Road and Bridge Inventory Update	As needed	31 March 201 <del>4</del>	Highway Dept.
Roadway Design	Plan Reviews	Track Reviews / Year	31 March 201 <del>4</del>	Highway Dept.
License Agreements	License Agreements Executed	Track Agreements / Year	31 March 201 <del>4</del>	Highway Dept.
Inspections	Paved Roads	Once / 5 years	31 March 201 <del>4</del>	Highway Dept.
	Unpaved Roads	Once / 5 years	31 March 201 <del>4</del>	
	Bridges	Once / 2 years	31 March 201 <del>4</del>	
Roadway Maintenance	Mowing ROW	Track miles / season	31 March 201 <del>4</del>	Highway Dept.
	Adopt-A-Road	Track miles / year	31 March 201 <del>4</del>	
	<del>Street Sweeping</del>	<del>Track miles / year</del>	<del>31 March 201<del>4</del></del>	
	Litter Control	Track miles / year	31 March 201 <del>4</del>	
Roadway Repair	Resurfacing - Overlay	Track miles / year	31 March 201 <del>4</del>	Solid Waste Dept.
	Resurfacing – Milled with new asphalt	Track miles / year	31 March 201 <del>4</del>	
Deicing Activities	Deicing Events	Track events / year	31 March 201 <del>4</del>	Highway Dept.
Program Evaluation	Evaluate Program Effectiveness	Annually	31 March 201 <del>4</del>	Highway Dept.